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1) Selected Publications

(Refereed papers, invited talks, review articles and book chapters)

- Y. K. Yap, "Boron-Carbon Nitride Nanohybrids," in Encyclopedia of Nanoscience and Nanotechnology, H. S. Nalwa Ed., American Scientific Publishers (www.aspbs.com/enn) (in press).
- T. Sasaki, Y. Mori, M. Yoshimura, Y. K. Yap and T. Kamimura, "Growth and development of nonlinear optical borate crystals for generation of visible and UV light," in Chapter 13 of Crystal growth technology, K. Byrappa and T. Ohachi, eds., Materials science series, Springer-Verlag / William Andrew (<http://www.williamandrew.com/titles/1453.html>), ISBN 0-8155-1453-0 (2003).
- Y. K. Yap, M. Yoshimura, Y. Mori, T. Sasaki and T. Hanada, "Formation of aligned-carbon nanotubes by RF-plasma-assisted pulsed-laser deposition," Special issue for Tsukuba symp. on carbon nanotubes in commemoration of the 10th anniversary of its discovery; S. Ijima et al. eds., Physica B 323 (2002) 341.
- Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Selective growth of flower-like carbon structures by RF-plasma-assisted pulsed laser deposition," J. Chem. Phys. 116 (2002) 6286.
- Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Hybridized boron-carbon nitride fibrous nanostructures on Ni substrates," Appl. Phys. Lett. 80 (2002) 2559.
- T. Kamimura, S. Fukumoto, R. Ono, Y. K. Yap, M. Yoshimura, Y. Mori, T. Sasaki and K. Yoshida, "Enhancement of CLBO surface damage resistance by improved crystallinity and ion-beam etching," Opt. Lett. 27 (2002) 616.
- Y. K. Yap, "Growth of carbon nanotubes and carbon-related materials by RF-plasma-assisted pulsed-laser deposition," Science and Technology of Carbon and Carbide Materials, Bull. Stefan Univ. 14 (2002) 63.
- M. Onda, T. Iwahashi, M. Okamoto, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Influence of pressure control on the growth of bulk GaN single crystal using a Na flux," J. Crystal Growth. 237-239 (2002) 2112.
- Zhang-Gui Hu, Naoki Ushiyama, Yoke Khin Yap, Masashi Yoshimura, Yusuke Mori and Takatomo Sasaki, "The crystal growth and nonlinear optical properties of $K_2Al_2B_2O_7$," J. Crystal Growth. 237-239 (2002) 654.
- R. Ono, T. Kamimura, S. Fukumoto, Y. K. Yap, M. Yoshimura, Y. Mori, T. Sasaki and K. Yoshida, "Effect of crystallinity on the bulk laser damage and UV absorption of CLBO crystals," J. Crystal Growth. 237-239 (2002) 645.

- H. Nakao, S. Makio, H. Furuya, K. Kawamura, S. Yasuda, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Crystal growth of GdYCOB for non-critical phase-matched second-harmonic generation at 860 nm, " J. Crystal Growth. 237-239 (2002) 632.
- K. Kawamura, H. Nakao, H. Furuya, S. Yasuda, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Effect of crystal growth atmosphere on the crystal birefringence of GdYCOB for third harmonic generation of Nd:YAG laser," J. Crystal Growth. 237-239 (2002) 629.
- Y. Mori, Y. K. Yap, T. Kamimura, M. Yoshimura and T. Sasaki. Recent development of nonlinear optical borate crystals for UV generation. Optical Materials. 19 (2002) 1.
- M. Okamoto, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "The ohmic character of doped AlN films," Diamond & Related Materials 10 (2001) 1322.
- Y. K. Yap, Y. Wada, M. Yamaoka, M. Yoshimura, Y. Mori and T. Sasaki, "Bond modification of BCN films on Ni Substrates," Diamond & Related Materials. 10 (2001) 1137.
- T. Hirao, K. Ito, H. Furuta, Y. K. Yap, T. Ikuno, S. Honda, Y. Mori, T. Sasaki, K. Oura, "Formation of vertically aligned carbon nanotubes by dual-RF-plasma chemical vapor deposition," Jpn. J. Appl. Phys. 40 (2001) L631.
- Y. K. Yap, T. Kamimura, M. Yoshimura, Y. Mori and T. Sasaki, "Development on the Generation of Coherent UV Light from Nonlinear Optical Borate Crystals," in 2001 IEEE/LEOS Summer Topical Meetings, 30 July-1 August 2001, Copper Mountain, Colorado, Invited paper MB4.1. (2001) 17.
- H. Furuya, H. Nakao, K. Kawamura, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Dependence of gray-track threshold of GdYCOB on the crystal growth atmosphere," J. Crystal Growth. 229 (2001) 265.
- Z. Hu, N. Ushiyama, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "The Growth of $K_2Al_2B_2O_7$ (KAB) Crystal by Modified Middle Seeded Solution Growth (MSSG) Method," Jpn. J. Appl. Phys. 40 (2001) L393.
- M. Yano, Y. K. Yap, M. Okamoto, M. Onda, M. Yoshimura, Y. Mori and T. Sasaki. Na: a new flux for growing h-BN crystals at low temperature. Jpn. J. Appl. Phys. 39 (2001) L300.
- T. Kamimura, R. Ono, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Influence of crystallinity on the bulk laser-induced damage threshold and absorption of laser light in $CsLiB_6O_{10}$ crystals," Jpn. J. Appl. Phys. 40 (2001) L111.
- Y. Mori, Y. K. Yap, T. Kamimura, M. Yoshimura and T. Sasaki, "Recent Advancement on Improving Crystal Reliability of CLBO and GdYCOB for High-Power UV Generation, " Abstract Book of The 1st Asian Conference in Crystal Growth and Crystal Technology (2000) 116.
- Y. Mori, Y. K. Yap, M. Yoshimura and T. Sasaki, "Progress on fabrication of nonlinear optical borate crystals for UV generation, " in Conference on Lasers and Electro-Optics Europe 2000, Nice, September 10-15, (IEEE Catalog Number 00TH8505) pg. 258.
- Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Improvement of reliability of borate crystals for high-power UV generation, " in the 12th Chinese Conference on Crystal Growth and the 8th Chinese Conference on Crystal Defects, Shanghai, May 15-20, 2000, J. of Synthetic Crystals (Rengong Jingti Xuebao) Vol. 29 No. 5 (Supplement) (2000) 11.

- Y. Mori, Y. Takahashi, T. Iwai, Y. K. Yap, M. Yoshimura and T. Sasaki, "Growth of high quality DAST crystal by using slope nucleation method," in the fifth International Conference on Organic Nonlinear Optics (ICONO'5), Davos, March 12-16, 2000, Final program of ICONO'5, paper INV 13 (2000).
- Y. K. Yap, S. Kida, Y. Wada, M. Yoshimura, Y. Mori and T. Sasaki, "Effect of carbon nitride bonding structure on electron field emission," *Diamond & Related Materials* 9 (2000) 1228.
- Y. K. Yap, T. Aoyama, Y. Wada, M. Yoshimura, Y. Mori and T. Sasaki, "Growth of adhesive c-BN films on a tensile BN buffer layer," *Diamond & Related Materials* 9 (2000) 592.
- M. Yano, M. Okamoto, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Growth of nitride crystals, BN, AlN and GaN by using a Na flux," *Diamond & Related Materials* 9 (2000) 512.
- Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Influence of disordered covalent bonds in a BN buffer layer on improving adhesion of c-BN films," *New Diamond and Frontier Carbon Technology* 10 (2000) 201.
- T. Sasaki, Y. Mori, M. Yoshimura, Y. K. Yap and T. Kamimura, "Recent development of nonlinear optical borate crystals: key materials for generation of visible and UV light," *Materials Science and Engineering R* 30 (2000) 1.
- H. Furuya, H. Nakao, Y. F. Ruan, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Alleviation of photo-induced damage in GdYCOB at elevated crystal temperature for noncritically phase-matched 355-nm generation," *Optics Letters* 25 (2000) 1588.
- Y. Mori, Y. Takahashi, T. Iwai, M. Yoshimura, Y. K. Yap and T. Sasaki, "Slope nucleation method for the growth of high-quality 4-dimethylamino-methyl-4-stilbazoliumtosylate (DAST) crystals," *Jpn. J. Appl. Phys.* 39 (2000) L1006.
- M. Okamoto, M. Yamaoka, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Epitaxial aluminium nitride thin films grown by pulsed laser deposition," *Diamond & Related Materials* 9 (2000) 516.
- Y. Wada, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Control of B-N and B-C bonds in BCN films synthesized by pulsed laser deposition," *Diamond & Related Materials* 9 (2000) 620.
- Y. K. Yap, T. Aoyama, S. Kida, Y. Mori and T. Sasaki, "Synthesis of adhesive c-BN films in pure nitrogen radio-frequency plasma," *Diamond & Related Materials* 8 (1999) 382.
- Y. K. Yap, S. Kida, T. Aoyama, Y. Mori and T. Sasaki, "Binding state transformation in high temperature synthesized CN thin films," *Diamond & Related Materials* 8 (1999) 614.
- M. Yano, M. Okamoto, Y. K. Yap, M. Yoshimura, Y. Mori and T. Sasaki, "Control of nucleation site and growth orientation of bulk GaN crystals," *Jpn. J. Appl. Phys.* 38 (1999) L1121.
- Y. K. Yap, S. Kida, T. Aoyama, Y. Mori and T. Sasaki, "Carbon nitride thin films synthesized at high temperature by using r.f.-plasma PLD," *J. Crystal Growth* 198-199 (1999) 1028.
- Y. K. Yap, T. Inoue, H. Sakai, Y. Kagebayashi, Y. Mori, T. Sasaki, K. Deki and M. Horiguchi, "Long-term operation of CsLiB₆O₁₀ at elevated crystal temperature," *Optics Letters* 23 (1998) 34.
- Y. K. Yap, K. Deki, N. Kitatochi, Y. Mori and T. Sasaki, "Alleviation of thermally induced phase mismatch in CsLiB₆O₁₀," *Optics Letters* 23